

Notice of Allowability

Application No.

09/654,177

Examiner

Jean B Corrielus

Applicant(s)

JALALI ET AL.

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/21/06.
2. ☒ The allowed claim(s) is/are 9-16, 19-22, renumbered as 1-6, 9-10, 7, 8, 11-12 respectively.
3. ☒ The drawings filed on 2/21/06 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


JEAN B. CORRIELUS
PRIMARY EXAMINER

3-30-06

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/21/06 has been entered.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Larry Moskowitz and Anatoly Weiser on 3/28/06 and 3/29/06.

IN THE CLAIMS:

Claims 1-8 and 17-18 have been canceled.

Claims 15, 21 and 22 have been amended as follow:

--15. (Currently Amended) An adaptive equalizer, comprising:

a plurality of taps being equal to a total number of symbols per sample set, the taps being operative to scale input symbols with a first set of associated coefficients

during a first time slot and with a second set of associated coefficients during a second time slot;

a coefficient adjustment node coupled to the plurality of taps, the coefficient adjustment node being operative to apply the first set of associated coefficients during the first time slot and to apply the second set of associated coefficients during the second time slot; and

a memory storage unit adapted to store coefficient adjustment information, wherein the associated coefficients are adjusted according to the coefficient adjustment information;

wherein the equalizer is operative to generate a carrier-to-interference ratio estimate, the equalizer having $(2L+1)$ coefficients ["C,"] "C", L being an integer greater than zero, the carrier-to-interference ratio estimate for a time slot "i" being given as:

$$y_i(n) = \sum_{\ell=-L}^L C_{i,\ell}(n) \cdot x_i(n - \ell T)$$

wherein "n" is a sample set index, each sample set comprising a plurality of input symbols, wherein "x" is an input symbol within a sample set, and wherein "T" is the period of the input symbol, x.

21. (Currently Amended) A mobile unit, comprising:

an antenna; and

an equalizer coupled to the antenna, the equalizer comprising:

a plurality of taps,

a summing node coupled to the plurality of taps; [, the summing node being operative to sum the tap outputs,] and

a memory storage unit,

wherein each tap of the plurality of taps has associated coefficient values, the equalizer being configured to perform equalization process continuously for each time slot of at least two time slots, each time slot of the at least two time slots corresponding to a plurality of occurrences, coefficient values of said each

time slot being stored at end of each occurrence of said each time slot and retrieved during the next occurrence of said each time slot, the plurality of taps being operative to scale a different set of input symbols during said each time slot by the coefficient values corresponding to said each time slot, the plurality of taps being further operative to generate tap outputs and being equal to a total number of symbols per sample set, the summing node being operative to sum the tap outputs, the memory storage unit being adapted to store coefficient adjustment information, wherein the associated coefficient values are adjusted according to the coefficient adjustment information.

22. (Currently Amended) An equalizer, comprising:

- a plurality of taps;

- a summing node coupled to the plurality of taps; [taps, the summing node being operative to sum the tap outputs;] and

- a memory storage unit;

- wherein each tap of the plurality of taps has associated coefficient values, the equalizer being configured to perform equalization process continuously for each time slot of at least two time slots, each time slot of the at least two time slots corresponding to a plurality of occurrences, occurrences of a first time slot of the at least two time slots alternating with occurrences of a second time slot of the at least two time slots, coefficient values of said each time slot being stored at end of each occurrence of said each time slot and retrieved during the next occurrence of said each time slot, the plurality of taps being operative to scale a different set of input symbols during said each time slot by the coefficient values corresponding to said each time slot, the plurality of taps being further operative to generate tap outputs and being equal to a total number of symbols per sample set, the summing node being operative to sum the tap outputs, the memory storage unit being adapted to store coefficient adjustment information, wherein the associated coefficient values are adjusted according to the coefficient adjustment information.—

IN THE SPECIFICATION:

Page 9, line 12, “386 application” has been replaced by –‘211 patent—

Page 14, line 14, after “herein”, --now abandoned-- has been inserted; line 22, after “with”, --the now abandoned—has been inserted.

Reasons for allowance

3. The following is an examiner’s statement of reasons for allowance: a mobile unit and/or equalizer are disclosed. The closest prior art Offord et al, Mueller et al and Nikias disclose the invention substantially as claimed. However, as argued by applicant in the response, filed on 9/30/05, pages 8-9, Offord et al, Mueller et al and Nikias do not teach or fairly suggest first and second associated coefficients, the first associated coefficients corresponding to a second plurality of time slot occurrences, the second associated coefficients corresponding to a second plurality of time slot occurrences, time slot occurrences of the second plurality of time slot occurrences alternating with time slot occurrences of the first plurality of time slot occurrences as recited in claims 9, 13, 21 and 22 are neither anticipated nor rendered obvious by Offord et al, Mueller et al and Nikias.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

EXAMINER’S COMMENT


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4. The claim objection, the drawing objection and the 112 rejection have been withdrawn in view of applicant's comment and/or amendment, filed 2/21/06.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jean B Corrielus
Primary Examiner
Art Unit 2611 3-30-06